SOME PARASITES OF FISHES OF THE UPPER GATINEAU RIVER VALLEY

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This report summarizes a study of some of the parasites of fish of the upper Gatineau drainage system in southwestern Quebec, Canada. Collections were made in eight lakes and streams in Gatineau and Pontiac counties during the

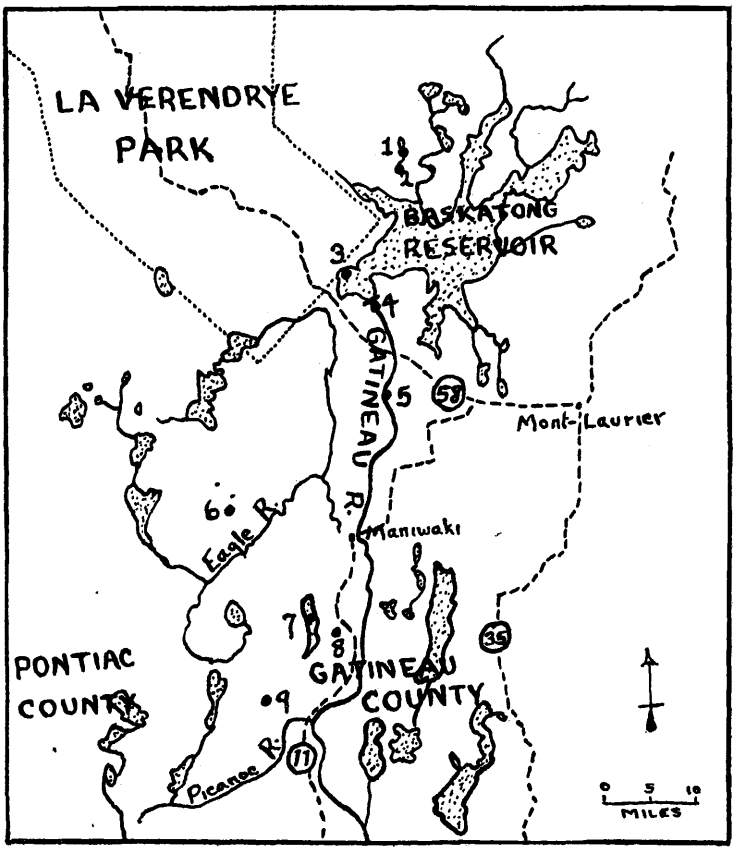

FIGURE 1. The upper Gatineau valley. Collecting points indicated by •. 1. Ruis Côte Jaune. 2. Lac Petite Jaune. 3. Western arm of Baskatong Reservoir. 4. Gatineau River below Mercier Dam. 5. Gatineau River at Chute de Grand Remous. 6. Flynn Lakes. 7. Blue Sea Lake. 8. Grant Lake. 9. Lake McGoey.

months of June, July, and August, 1950. The following procedure was used in examining the fish. First, the exterior of the specimens, including the skin, gills, and fins, was searched. Second, the viscera were removed and examined. Parasites were first placed in a physiological saline solution to inhibit the formation of a

mucus layer about them, and then were transferred to ten percent formalin for killing and then to a five percent formalin solution for preserving. Although these killing and fixing methods are not recommended where better facilities are available, they proved to be adequate under the existing conditions, i.e., collection and preservation of material in the field. Most of the parasites were examined with a binocular microscope at the time of dissection, but no final identifications were attempted until the specimens were brought back to the laboratory, where slides of the stained material were prepared. All of the parasites were stained with Delafield's hematoxylin and mounted in Canada balsam except the nematodes, which were cleared and mounted unstained.

TABLE 1

Collecting data

Species of Fish	Place Collected	No. Examined	Percent Parasitized	Parasites
Speckled Trout	Flynn Lakes	9	100	*Eubothrium salvelini*
Black Bullhead	Blue Sea Lake	2	100	*Allocreadium ictaluri* *Corallobothrium fimbriatum*
Yellow Perch	Blue Sea Lake	10	40	*Clinostomum margination* *Dichelyne cotylophora* *Contracecum* sp. *Illinobdella* sp. *Actinobdella* sp.
Walleye	Baskatong Reservoir	28	100	*Bothriocephalus cuspidatus* *Proteocephalus stizostethi* *Proteocephalus* sp. *Contracecum* sp.
Northen Pike	Lac Petite Jaune Ruis Côte Jaune Baskatong Reservoir Gatineau River	37	37.8	*Proteocephalus pinguis* *Proteocephalus stizostethi* *Contracecum brachyurum* *Leptorhyncoides thecatus*
Chain Pickerel	Grant Lake	1	100	*Proteocephalus pinguis*
Smallmouth Black Bass	Lake McGoey	2	100	*Leptorhyncoides thecatus*

Of a total of 89 fish examined, 60 or 67.4 percent were found to harbor parasites of some kind. In comparison with other surveys in this same general area, this incidence of infection seems rather low. Bangham (1941) found that 84.3 percent of the fish from Algonquin Park lakes were parasitized, and a later study of his in the same locality (Bangham and Venard, 1946) showed that 75.8 percent carried parasites. On the other hand, this amount of deviation seems likely enough when degree of infection in the individual species of fish is considered. Choquette (1948) found 28.6 percent of the speckled trout from Laurentide Park in eastern Quebec infected with *Eubothrium salvelini*. MacLulich (1943) in a study of the parasites of the speckled trout in Algonquin Park found 66 percent were parasitized. In the upper Gatineau valley, all of the trout which we examined contained this parasite. Our figures may be of some significance in that they indicate also that the life cycles of certain parasites, especially those of the northern pike, have not yet become established in this region. The strong influence of habitat in determining the distribution of parasites is evident here. All of the pike collected in

the Baskatong Reservoir and a small lake and stream draining into it contained light infections of *Proteocephalus stizostethi*, *P. pinguis*, and *Contracecum brachyurum*, while specimens from the Gatineau river proper were infected only with the spiny-headed worm *Leptorhyncoides thecatus*.

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